What is claimed is:

CLAIM

1. An apparatus for measuring dimensions of an object comprising:

(A) a source of microwave signals having a predetermined amplitude and frequency,

(B) transmitting means for radiating said microwave signals,

(C) receiving means for receiving said microwave signals, and

(D) processor means for evaluating such received signals.

2. The apparatus of Claim 1, in which

such transmitting means comprises an antenna array of a plurality of miniaturized antennas.

3. The apparatus of Claim 2, in which

such miniature antennas are horizontally polarized

4. The apparatus of Claim 1, in which

such receiving means comprises an antenna array of a plurality of miniaturized antennas.

5. The apparatus of Claim 4, in which

such miniature antennas are horizontally polarized.

6. The apparatus of Claim 1, wherein

such transmitting means and such receiving means are formed in a linear configuration.

7. The apparatus of Claim 1, wherein

such transmitting means and such receiving means are formed in a circular configuration.

8. The apparatus of Claim 1, in which

such processor means calculates one or more of the following measurements:

(A) height;

(B) head size;

(C) neck;

(D) chest;

(E) waist;

(F) hips;

(G) inseam; and

(H) sleeve.

9. The apparatus of Claim 1, wherein

such object being measured comprises a human being.

10. The apparatus of Claim 1, wherein such processor means comprises a computer.

11. The apparatus of Claim 1 further comprising:

(A) at least one server unit;

(B) a means for relaying said measured dimensions from said processor means to said at least one server unit; and

(C) a means for relaying said measured dimensions from said at least one server unit to at least one user.

12. A method for measuring the size and shape of an object using microwave signals, comprising:

(A) providing an apparatus for transmitting and receiving a microwave signal;

(B) locating said object relative to the apparatus;

(C) transmitting said microwave signal towards the object using said apparatus and causing said transmitted signal to be incident on the object;

(D) receiving said microwave signal not absorbed by the object;

(E) extracting information from said received signal; and

(F) determining at least one measurement value using said extracted information from said received signal.

13. The method of Claim 12, wherein

such object being measured comprises a human being.

14. The method of Claim 12, in which

such at least one measurement value is selected from the group consisting of:

(A) height;

(B) head size;

(C) neck;

(D) chest;

(E) waist;

(F) hips;

(G) inseam; and

(H) sleeve.

15. The method of Claim 12, further comprising the step of communicating said extracted information to at least one user.

16. The method of Claim 15, wherein such step for communicating said extracted information is performed by a communication system comprising:

(A) at least one server unit;

(B) a means for relaying said measured dimensions from said processor means to said at least one server unit; and

(C) a means for relaying said measured dimensions from said at least one server unit to said at least one user.

17. A method of measuring the dimensions of an object comprising:

generating microwaves,

directing the microwaves toward said object,

measuring the unabsorbed microwave energy, and

determining the size and shape of said object from said unabsorbed microwave energy.

18. The method of Claim 17, wherein

such object being measured comprises a human being.

19. The method of claim 17, in which

said microwaves are generated by an oscillator for generating microwaves of a predetermined frequency in the microwave region chosen for maximum absorption by the object.